XO
R755
V.5
#1

# OREGON FLORA NEWSLETTER

Volume 5 Number 1 • Oregon State University • February 1999

## Louis F. Henderson (1853-1942), early Northwest botanist, Part I

*by Rhoda Love*

+ see p. 3

Louis F. Henderson was one of the most interesting and active of the pioneer botanists of the Pacific Northwest. He was an articulate writer who left voluminous descriptions of the landscapes and plants of our area as he observed them between 1877 and 1942. He was also an energetic outdoorsman who botanized in virtually every corner of Oregon, Idaho and much of Washington during his 65 years in the field. Of our early resident botanists, Henderson was the best educated and has left the most complete record. His life story is a fascinating one which demands a full-scale biography. It is almost impossible to do justice to the richness of his life in a brief biographical sketch such as this.

Louis F. Henderson, grandson of a US Senator, was born near Boston in 1853. His mother was a teacher and his father, son of the Senator from Mississippi, was a New Orleans lawyer. The family was in the South in 1861 when, due to complicated circumstances and the unexpected start of hostilities between the north and south, young Louis, his mother and brother were forced to remain on a poor farm in

*See Henderson, page 2*

*L.F. Henderson*
*Archival photo, University of Oregon Knight Library*

## In shooting stars, little things mean a lot

*by Kenton L. Chambers*

In his *Synoptical Flora of North America,* published in 1878, the Harvard botanist Asa Gray—a pre-eminent figure among 19th century American taxonomists—treated the Shooting Star genus *Dodecatheon* (Family Primulaceae) as comprising a single species *D. meadia,* divided into seven varieties. Only a decade later, Edward L. Greene, a professor at the University of California, commented that Gray had "a mere herbarium acquaintance with the plants," whereas "knowledge of the plants...in the living state, either on their native soil or in gardens" was necessary to "diagnose the species."

Confident of his abilities as a field naturalist and collector of western American plants, Greene began in 1888 to divide *Dodecatheon* into numerous separate species. Over several decades he described 18 species and varieties in the western United States, while other botanists of the early 1900s, including C. V. Piper, Alice Eastwood, P. A. Rydberg, Thomas Howell, and Aven Nelson also "diagnosed" many additional new species of the genus. Apparently, in the eyes of Asa Gray, all shooting star plants looked pretty much alike, while to botanists who knew *Dodecatheon* in its native haunts, numerous differences could be found, if one looked closely enough.

In general terms, it would seem that Gray's interpretation of the genus, which is confined to North America and adjacent Siberia, as a single, highly variable species was understandable. The flowers of shooting stars have a distinctive, easily recognized pattern, and the supposed species differences are merely minor variations on a single floral theme. The pendant flowers with upraised reddish-purple petals and projecting cone-shaped anthers are adapted to pollination by bees, which gather pollen by grabbing the petals and vibrating the flowers with a buzzing of their wings. Similar "buzz-pollinated" flowers are found in genera of the potato family, such as *Solanum* and *Lycopersicon,* and perhaps in the liliaceous genus *Erythronium.* No species of *Dodecatheon* diverge from this pollination system, so their flowers must inevitably maintain the same architectural *bauplan.*

In the Oregon Vascular Plant Checklist we recognize nine species of *Dodecatheon,* with two additional subspecies under one species, *D. pulchellum.* This comes close to the eight

*See Dodecatheon, page 4*

## Project News

The Oregon Flora Newsletter is entering its fifth year! The mailing list consists of 525 individuals and institutions.

We next plan to publish a checklist of monocots, other than the grasses, as a booklet similar to the Asteraceae Checklist we published last year. After this volume, we will publish miscellaneous dicot families as drafts become available. Recently, Ken and Henrietta Chambers have been particularly active in completing checklist treatments.

Twelve students and several volunteers are currently working on the Flora project. The Oregon Plant Atlas Project database now has 117,000 records (see map on back page). In addition there are about 20,000 records in the herbarium specimen database. Charlene Simpson is helping us check the database for accuracy and adding information needed for mapping. Jason Alexander is redesigning the herbarium database so that it better conforms with the Atlas Project. A top priority is to put together a demonstration of the electronic Atlas, using data on *Senecio* species and the Java computer program written by Clay Gautier.

Illustrations of *Erythronium oregonum* on the front and back covers by Linda Ann Vorobik.

The Oregon Flora Newsletter is published three times a year by the Oregon State University Herbarium and the Oregon Flora Project. The Editor is Rhoda Love and the Production Assistants are Alisa Anderson and Aaron Hodges.

**Oregon Flora Project Coordinator:**
Scott Sundberg
**Checklist Project Leaders:**
Kenton Chambers
Richard Halse
Jimmy Kagan
Aaron Liston
Rhoda Love
Robert Meinke
Brad Smith
Scott Sundberg
Karl Urban
David Wagner
Peter Zika
**Checklist Advisory Board:**
Ed Alverson
Karen Antell
Henrietta Chambers
John Christy
Tom Kaye
Susan Kephart
Frank Lang
Don Mansfield
Kareen Sturgeon
**Atlas Project Leaders:**
Robert Frenkel
Clay Gautier
Manuela Huso
Tom Kaye
Jon Kimerling
George Lewis
Aaron Liston
Bruce Newhouse
Charlene Simpson
Scott Sundberg
Dick Straw
Peter Zika
Don Zobel
**Atlas Project Regional Coordinators:**
Bruce Barnes
Dick Brainerd
Paula Brooks
Katie Grenier
Lucile Housley
Jerry Igo
Andy Robinson
Charlene Simpson
Veva Stansell
Dick Straw
Faye Streier
Lisa Wolf
**Address correspondence to:**
Scott Sundberg
Department of Botany & Plant Pathology
Oregon State University Cordley Hall 2082
Corvallis, OR 97331-2902
E-mail: sundbers@bcc.orst.edu
(541) 737-4338; FAX (541) 737-3573
http://www.orst.edu/dept/botany/herbarium

*Printed on Recycled Paper*

*Henderson, continued from front page*

Mississippi throughout the Civil War. They survived and were reunited with his father only to be faced with a family tragedy. The father, an abolitionist, was brutally murdered by angry whites during a New Orleans race riot in 1866. Moving back north with his mother and older brother, Henderson attended Cornell University, studying languages and botany. After graduation, he came West, first to California and then to Oregon. From approximately 1877 to 1889, Henderson was a teacher at Portland High School. During this time he started collecting and began to build a large personal herbarium.

In 1883, after what his daughter called a "whirlwind love affair," Henderson and fellow-teacher Kate Robinson were married in Portland. Their two daughters, Margaret and Connie were born in 1886 and 1888. In 1889 typhoid fever forced Henderson to resign his school position and move his family to Olympia, Washington to recuperate near the home of his brother Leland. By 1890, he had recovered sufficiently and he joined the O'Neil Expedition to explore the interior of the Olympic Peninsula. Later, he accepted a position with the State of Washington to collect plants for the state's display at the 1893 Chicago World's Fair. He and his family then moved temporarily to Chicago to set up the Washington State exhibit.

After leaving Chicago in 1893, Henderson became the first professor of botany at the new University of Idaho in Moscow, where the family lived until his daughters completed college in 1911. They bought a farm which they called "Dingly-Dell" about seven miles outside of Moscow. The Henderson girls were popular and Dingly Dell became the site of many young peoples' parties. Kate busied herself in Moscow founding a woman's service club and helping bring the first public library to Moscow. In 1900, Henderson and Kate spent a sabbatical year at Harvard University, which he later described as "the most enjoyable year I ever spent in my life." Botanist C. V. Piper of Washington State College was also on sabbatical at Harvard that year, and the Hendersons and the Pipers made a happy foursome enjoying concerts and museum tours.

During the Idaho years, Henderson collected steadily when he was not teaching. For example in 1895, from the first of June to the end of September, he and a student covered thousands of miles on foot in central Idaho. Then disaster struck. Henderson had deposited his own extensive personal herbarium of 10,000 sheets — the result of nearly 30 years of collecting — at the University, only to see it destroyed when the Administration building burned to the ground in 1906. It was estimated at the time that nearly 85,000 herbarium specimens were destroyed, most collected by Henderson.

He was then 52 years old and had lost what he called "one of the joys of my life."

*[Editor's note: This brief biography of L. F. Henderson will be completed in the next issue of the* Oregon Flora Newsletter.*]*

# The family Fagaceae in Oregon
# Part II: the Oaks

*by Henrietta Chambers*

*(Editor's note: Part I of Dr. Chambers' article on the family Fagaceae appeared in the October, 1998 issue of* OFN.*)*

The genus *Quercus* in Oregon is represented by five species, plus one named and several unnamed hybrids. If we divide them into three groups, White Oaks, Red or Black Oaks, and Golden-cup Oaks, we can note similarities and differences among certain of the taxa. Following are the major features of each group and the species that occur in Oregon.

*California black oak* (Quercus kelloggii)

*Illustration by Jeanne R. Janish from Hitchcock et al. 1969,* Vascular Plants of the Pacific Northwest, *courtesy of Universtiy of Washington Press.*

White Oaks - Leaves deciduous (ours), lobed but without awned teeth; acorns take one year to mature; cup scales may be tomentose but not embedded in the pubescence [species in Oregon: *Quercus garryana*].

Red or Black Oaks - Leaf blades, if lobed, then with awned teeth (if entire, then often with a bristle at the leaf apex); acorns generally take two years to mature; cup scales are not embedded in tomentum [*Q. kelloggii* and *Q. sadleriana*].

Golden-cup Oaks - Evergreen with leathery, entire or awn-toothed leaves; acorns take two years to mature; cup scales are embedded in tawny or glandular tomentum [*Q. chrysolepis* and *Q. vaccinifolia*].

Many oak hybrids have been reported and named, particularly within the White and Red/Black groups. In most cases, hybridization results in solitary trees or small groups of intermediate individuals. Occasionally hybrid populations occur which cover a large geographic range.

Our single White Oak species, *Q. garryana* Douglas ex Hook var. *garryana* (Garry oak) is the most conspicuous and widespread of Oregon's oaks. These trees occur at low elevations from British Columbia to California. A shrubby or small tree variant, var. *breweri*, once considered a separate species, occurs at 1400-1900 m in elevation in the Siskiyou region of northern California and southern Oregon. Very few of the herbarium specimens of this taxon designate the size of the tree that the twig has come from, but the buds of var. *breweri* are generally small, rounded and reddish, while those of var. *garryana* are more elongate and yellowish to cream in color.

*Quercus kelloggii* Newb. (California black oak) is widespread in California and occurs in Oregon as far north as Lane County. The trees are up to 25 m in height with deciduous leaves that are lobed and have teeth with bristles. The distinctive acorns have a cap that covers approximately three-fourths of the nut, and the scales are broad and up to 4 mm in length.

[Do *Quercus garryana* and *C. kelloggii* hybridize where they come in contact in southern Oregon? Anecdotal evidence from the Eugene area suggests that they may, but as far as we know, the hypothesis has not been tested. Editor]

*Quercus sadleriana* R. Br. (Sadler's oak) is endemic to a small area that spans the Oregon-California border in the Siskiyou Mountains. This shrub species is one of the most distinctive western oaks. The large (up to 14 cm long), evergreen leaves are obovate to elliptic and have prominent veins and coarsely serrate margins.

*Quercus* x *morehus* Kellogg (oracle oak) is a hybrid between *Q. kelloggii* and *Q. wislizeni* A. DC (Sierra live oak, interior live oak), a widespread California species that includes trees and shrubs. The hybrids are known from several populations that occur from northern Douglas County to southern Josephine County as well as California. The entire to spinose margins of *Q. wislizeni* are apparent in the leaves of the hybrid, which are quite intermediate between the two parents.

*Quercus chrysolepis* Liebm. (canyon live oak, maul oak) is a widespread and variable species that occurs on ridges, canyons and rocky slopes from 200-2600 m in elevation. These plants range from medium-sized trees to shrubs. The evergreen leaves can be oblong or acuminate, and the margins vary from entire to spinulose-dentate. Both leaf forms may occur on the same plant. The lower leaf surface has a dense layer of golden, glandular and multiradiate hairs, especially early in the season. The acorn cap varies from saucer-shaped to turbinate; the acorns are oblong to fusiform. This species grows from Mexico to southern Oregon and east to New Mexico and Nevada. Its great diversity led earlier workers to name several varieties, but more recent study does not support the recognition of subspecific taxa.

*Quercus vaccinifolia* Kellogg (huckleberry oak) is a shrubby evergreen species that grows on dry ridges and rocky slopes from 900 to 2800 m from northwestern Nevada to northern California and southern Oregon (Josephine and Curry Counties). These low shrubs are prostrate or erect and up to 1.5 m tall. Their leaves resemble those of huckleberry but have a more leathery texture. The leaves may be entire or have irregular, mucronate teeth. This taxon can be distinquished from *Q. chrysolepis* by the absence of glandular trichomes on the undersides of the leaves, which are glaucous below, and by thinner acorn cups and smaller nut-attachment scars. These two species of golden-cup oaks hybridize at lower elevations in northern California and southern Oregon.

*Dodecatheon, continued from front page*

species and three additional varieties mentioned in *Flora of the Pacific Northwest*. One Oregon species, found in the northwest coastal counties and adjacent Washington, has yet to be formally described. A complete treatment of the genus, published by H. J. Thompson in 1953, was relatively conservative in recognizing 14 species and 13 additional subspecies in North America. This is a long way from the single species envisioned by Asa Gray, but it is fewer than the large number named by Greene and his contemporaries early in the present century.

Shooting stars show their greatest diversity in the Pacific Coast states, occupying a wide range of environments—from arctic and alpine tundra to mountain meadows, wet cliffs and rocky riverbanks, serpentine seeps, oak woods, moist prairies, summer-dry grasslands, and sagebrush deserts. Lacking floral differences, the species have evolved ecological and geographical barriers to intercrossing. Additionally, polyploid differences in chromosome numbers may prevent hybridization, even between plants within the same morphologically defined species.

The "little things that make a difference" in *Dodecatheon* taxonomy include minor variations in stigmas, anthers, capsules, petal numbers, leaf shape, and pubescence. The key to species in *Flora of the Pacific Northwest,* pages 352-353, illustrates these traits quite well. I found that the stigma, anther, and pubescence features are well preserved in herbarium specimens; mature capsules, however, are seldom collected. In only a few species is leaf shape consistent enough to be useful. White-flowered forms occur in several species, but only in *D. dentatum* is this trait consistent. Similarly, 4-petalled flowers are uniformly present only in *D. alpinum* but are sporadic in some other species. A list of the Oregon taxa, with some of their important features and their geographic range in the state, is given below:

*Dodecatheon alpinum*: Style with an enlarged "pin-head" stigma; petals and anthers *four*; filaments free; tissue between the anther sacs ("connective") transversely wrinkled; plants glabrous; mountain stream-banks and meadows [closely allied with *D. jeffreyi*].

*Dodecatheon jeffreyi*: Style with an enlarged "pin-head" stigma; petals and anthers usually *5*, rarely 4; filaments free; anther connective transversely wrinkled; plants glabrous or more often lightly glandular-pubescent, especially the inflorescence; mountain streambanks, marshes and meadows [plants often larger than *D. alpinum*].

*Dodecatheon cusickii*: Stigma not enlarged; filaments united basally into a *yellow* tube 1.5-2.5 mm long; anther connective smooth; whole plant densely *glandular-pubescent*; grasslands and sagebrush lands east of the Cascade Mtns. [closely allied with *D. pulchellum*].

*Dodecatheon poeticum*: Stigma not enlarged; filaments united basally into a *purplish* tube 1.5-2.0 mm long; anther connective smooth or transversely wrinkled; whole plant densely *glandular-pubescent*; oak woods, grasslands, and basalt outcrops, Columbia River Gorge [closely allied with *C. cusickii*].

*Dodecatheon hendersonii*: Stigma not enlarged; filaments united basally into a purplish tube 2-4 mm long; anther connective smooth or transversely wrinkled; leaves *round to broadly obovate*, smooth-margined, glabrous; prairies and oak woods west of the Cascade Mtns.

*Dodecatheon pulchellum*: Stigma not enlarged; filaments usually united into a tube; leaves entire, usually glabrous; anther connective smooth. ssp. *pulchellum*: filament tube *yellow*; anthers 3.5-5.0 mm long; widespread east of the Cascade Mtns., from sagebrush lands to high alpine. ssp. *macrocarpum*: filament tube *yellow*; anthers 5.5-7.0 mm long; Columbia Gorge, Willamette Valley and adjacent foothills. ssp. *monanthum*: filament tube *purplish*; anthers 3.5-5.5 mm long; scattered sites east of the Cascade Mtns., Willamette Valley, and Siskiyou Mtns.

*Dodecatheon conjugens*: Stigma not enlarged; filaments *free*; anther connective strongly transversely wrinkled; leaves glabrous or lightly pubescent, often obovate, smooth margined; sagebrush lands to mountain meadows east of the Cascade Mtns.

*Dodecatheon dentatum*: Stigma not enlarged; petals white; filaments free; anther connective smooth; leaf blades glabrous, ovate, often with toothed margins; wet cliffs, often near waterfalls, Columbia River Gorge.

*Dodecatheon* species *novum*: Stigma not enlarged; petals reddish-purple; filaments free; anther connective smooth; leaf blades glabrous, oblanceolate, often with toothed margins; North Coast Range, on rocky peaks and bare basalt riverbanks, possibly also in the Siskiyou Mtns.

Dodecatheon dentatum, *the only consistently white-flowered shooting star in our flora. Illustration by Jeanne R. Janish from Hitchcock et al. 1969,* Vascular Plants of the Pacific Northwest, *courtesy of University of Washington Press.*

## Ken Chambers initiates new Oregon Flora Herbarium Endowment

Professor Emeritus Kenton Chambers and his wife Henrietta have established a new Oregon Flora Herbarium Endowment Fund to help support the Oregon Flora Project. Ken recently sold a valuable 40-year stamp collection to provide the initial $28,000 funding for the endowment.

Ken has stated, "My interest in collecting stamps has been tapering off, and I felt that a better use for the value of the stamps would be to cash them in and make the money available for botanical research on Oregon's flora. Now that the new endowment has been created through the OSU Foundation, the hope is that other people may wish to add to it, specifically for the preparation of the much anticipated new Flora of Oregon."

As is usual with such endowments, the principal funds will not be tapped, but will gradually increase in value through the investment activities of the OSU Foundation. However, the annual interest on the account will be made available to the Herbarium to be spent in support of the Oregon Flora Project. Persons who wish to donate in support of the Flora of Oregon will now have a choice of where to donate funds — either directly as in the past through checks to the Foundation or the Friends Group, or to the new Oregon Flora Herbarium Endowment Fund. OFN readers may contact Scott Sundberg for more information about ways to support the Oregon Flora Project.

---

## Karl Urban 1943 -1999

In 1995 Karl Urban wrote an article for the Oregon Flora Newsletter called, "Requiem for a laptop: seeds of the Oregon Checklist Project." In the article he described his seminal work on the Oregon Vascular Plant Checklist, which, as the article suggests, led to the untimely death of his laptop computer. It is with great sadness that we must announce his own untimely death. Karl passed away January 15 in Pendleton. Karl had an important role in the initiation and continuation of the Flora project. We miss him, both as a friend and as an accomplished botanist.

## Thanks

Thanks to the Native Plant Society Umpqua Valley Chapter for their generous contribution to the Flora Project.

Thanks to the following individuals who have recently contributed to the project via the OSU Foundation and the Friends Group: Catherine Askrenk, Mary Barkworth, Jennifer Beigel & Steve Marsden, Richard Brock, Richard Callagan, Ken & Henny Chambers, Stephanie Changaris, Kent Coe, Ellen A. Crumb, Nancy Cundill, Robyn Darbyshire, Jan & Dave Dobak, Heidi Dobson, Jim Duncan, Marge & Dick Ettinger, Jean Findley, Joan Fosback, Jean France, Bob Frenkel, Stu Garrett, James & Janice Gerdemann, Louise Godfrey, Bonnie Hall, Don Heinze, Aileen Ho, Pat & Noel Holmgren, Charlene Holzwarth, Larry Hufford, Jeanne Huffstutter, Ulo Kiigemagi, John Koenig, Arlene Larison, Bob Lemon, Kenneth & Robin Lodewick, Rhoda & Glen Love, Jay & Cecelia Lunn, Dan Luoma, Danna Lytjen, Cathy Maxwell, Peter & Esther Gruber McEvoy, Aneta McIntyre, Paul McMahon, Merilee Meiners, Kathy Merrifield, Gregory A. Miles, Jeanne & Frank Moore, Barbara Mumblo, Ed Myers, Bonnie Brunkow Olson, Robert Ornduff, Nick Otting, Theodore Palmer, Glenna Parker, Ginny & Jim Post, Bob Powne, John Reynolds, Lundy & Fred Reynolds, Don Roberts, Richard Robohm, Freeman Rowe, Reid Schuller, Veva Stansell, Daphne & Jeffrey Stone, Dee Strickler, N. Hope Stubbs, Kareen Sturgeon, Norman & Donna Sundberg, George Swan, Mildred Thiele, Maria Ulloa, Gilbert & Alison Voss, Phil Warner, Nancy Weber, Fred Weinmann, Margaret Wiese, Margi Willowmoon, Mark Wilson and Gordon D. Wogan.

Thanks to the following people who have helped by volunteering, sending species lists or specimens, or providing information on Oregon plants: Jerry Baker, Mary Barkworth, Wilbur L. Bluhm, Jim Duncan, Linda Geiser, Charlie Johnson, Jenny Lippert, Jay Lunn, Esther Gruber McEvoy, Arnold Tiehm, Brad Tong, Kuo-Hsiung Wang and Jean Zach.

Special thanks to Bonnie Hall for providing original prints for major donors to the Friends Group.

Name ______________________________

Address ____________________________

___________________________________

___________________________________

Phone and/or e-mail __________________

Mail to:

Scott Sundberg
Oregon Flora Project
Dept. of Botany & Plant Pathology
Oregon State University
2082 Cordley Hall
Corvallis, OR 97331-2902

### Would you like to make a donation?

Tax-deductable donations can be made to the Oregon Flora Project by sending a check made out to the Oregon State University Foundation to Scott Sundberg at the address on this page. Please note on the check that it is for the Oregon Flora Project. Your donations go primarily toward newsletter expenses and student wages.

☐ Please check here if you do not wish to have your name listed in our "Thanks" column or on our Internet web site.

☐ Please send the Asteraceae Checklist (include check if appropriate).

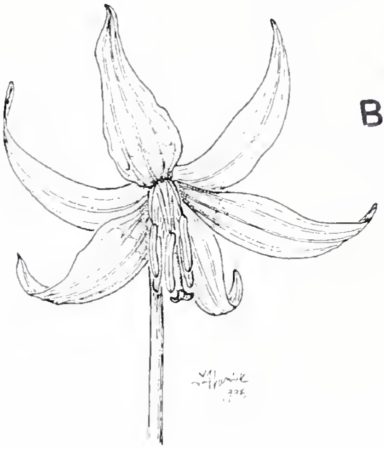
☐ Please put me on the *Oregon Flora Newsletter* mailing list.

Oregon Flora Project
Dept. of Botany & Plant Pathology
Oregon State University
2082 Cordley Hall
Corvallis, OR 97331-2902

*Return Service Requested*

Non-Profit Org.
U.S. Postage
**PAID**
Corvallis, OR
Permit No. 200

LIBRARY
MA
NEW Y
BOTANICAL GA



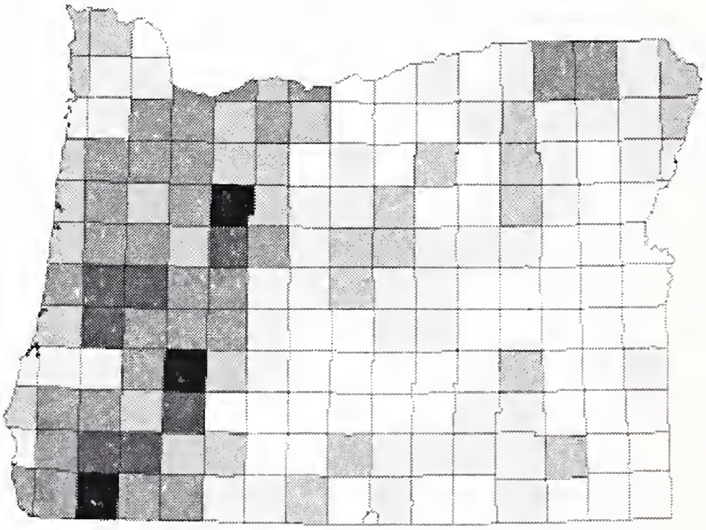
John F. Reed, Library Director
The New York Botanical Garden
Bronx NY 10458-5126

## Did you know?

- The shooting star, *Dodecatheon hendersonii*, was named in 1886 by Harvard's Asa Gray for Louis F. Henderson, then a Portland high school teacher. This was one of only 2 species of *Dodecatheon* that Gray recognized in North America.

- In 1882, on a collecting trip with fellow botanist Thomas Jefferson Howell, Henderson noted hundreds of acres of tufted hairgrass (*Deschampsia cespitosa*) at Tillamook Bay. Today the Tillamook salt marshes have been mostly converted to pasture.

- In 1923, at the age of 70, Henderson swam across the Columbia River from Hood River to the Washington shore. The next year he became the first Curator of the University of Oregon Herbarium, a position he filled until he was 86 years old.



**Number of species, subspecies and varieties per Atlas block in the Atlas database.**

*This summarizes data in a database of plant observations in January, 1999. The Atlas will also include herbarium specimen data. Tens or hundreds of thousands of records will eventually be added from other sources.*

Ian Shackleford assisted with map production.

| | |
|---|---|
| □ | 0 |
| ░ | 1-199 |
| ░ | 200-399 |
| ▒ | 400-599 |
| ▓ | 600-799 |
| █ | >800 |

0
755
5
2

# OREGON FLORA NEWSLETTER

Volume 5 Number 2 • Oregon State University • June 1999

## Louis F. Henderson (1853-1942), early Northwest botanist, Part II

*by Rhoda Love*

*[Part I of Henderson's life story can be found in the last issue, Vol. 5(1), February, 1999.]*

Disheartened when his beloved herbarium was destroyed by fire at the University of Idaho in 1906, Louis F. Henderson retired from teaching in 1908. Three years later, when his daughters Margaret and Connie had finished college, he moved his family to the 80-acre family homestead in Hood River bequeathed to him by his mother. There he and his wife Kate planted a 40-acre apple orchard where he attempted to make a living as a commercial orchardist. Kate again joined in the social life of a new town and was instrumental in raising money for Hood River's first library.

Henderson remained on this ranch until he was 70 years old, however, letters make it clear that he missed the botanical

*See Henderson, page 8*

Archival photo University of Oregon

*Henderson, age 79, collecting near Fort Yukon, Alaska where he was "nearly devoured by mosquitoes, no-seeums, deer flies and horse flies."*

## Escaped ornamentals

*by Scott Sundberg*

On my way to and from work each day I pass three patches of cultivated plants that are growing in unexpected places. I see daffodil (*Narcissus pseudonarcissus*) in a horse pasture, greater periwinkle (*Vinca major*) along a roadside ditch, and St. John's wort (*Hypericum calycinum*) on a steep roadbank in a Douglas fir (*Pseudotsuga menziesii*) forest. Most people are familiar with plants such as these that have "escaped" cultivation and are growing either in wild settings or as weeds on cultivated land. A crop plant or garden ornamental has become "naturalized" when it grows and reproduces in areas that are not planted and/or maintained as cultivated ground. Some cultivated plant species thrive in native habitats. English ivy (*Hedera helix*) and holly (*Ilex aquifolium*) are familiar examples. These have become invasive species in forests in several parts of western Oregon. Purple loosestrife (*Lythrum salicaria*) and yellow iris (*Iris pseudacorus*) are attractive wetland weeds.

We are attempting to include in the *Oregon Vascular Plant Checklist* all cultivated plant taxa that have become naturalized in at least one place in Oregon. Plant species growing in unmanaged areas that have persisted at least three years *and* have spread beyond the place of introduction are included. Accounting for them now will help us plan and develop the *Flora of Oregon*. By tracking the "escapees" we may also be able to foresee problems with species that could become invasive.

A good example of an escaped cultivated plant is the periwinkle I see each day. It is spreading along a ditch, forming isolated clumps. And it turns out that it was collected along the same road 45 years ago! Daffodils grow in many parts of western Oregon, often in areas that are not irrigated or otherwise managed, and are included in the Checklist. On the other hand, there are numerous examples of plant occurrences that are more difficult to assess, including the St. John's wort. Sometimes all we know is that a plant is growing in an unusual place and is not spreading. In these cases the way the plant *arrived* at the site is important. Ornamental shrubs sometimes take root from piles of discarded yard waste, and these are considered to have been spread by people, not by natural means, and would thus not be listed. The St. John's wort I see each day could have grown from discarded yard

*See Ornamentals, page 10*

*Henderson, from front page*

life. Despite his age, Henderson was far from a frail man. Just nine days before his birthday he swam across the then undammed Columbia River from Hood River to the Washington side. Fortunately, in 1924 he was lured out of retirement by Albert Sweetser, head of the Department of Botany at the University of Oregon, who offered him the Curatorship of the Herbarium in Eugene. Henderson was delighted to leave the orchard in Kate's hands and return to academia. He and Kate bought a small house in Eugene, however she preferred to spend much of her time in Hood River overseeing the orchard which she had won from her husband as the result of a political wager. Kate became an excellent business woman, profiting from the sale of fruit and later dabbling in real estate.

At the University of Oregon, Henderson threw himself into vigorous botanical activity, collecting, mounting, labeling and building up the herbarium, a regimen that would have taxed a person half his age. Of this time he wrote, "These past years have been one of the pleasantest periods of my life. My work has been: take care of the herbarium, name and mount thousands of plants to increase it, which takes all of late fall, winter, and early spring. My summer duties are trips into every part of Oregon, collecting for the herbarium and exchanging."

During his 13 years at the University of Oregon, Henderson collected systematically throughout the state. In 1924 he collected near Burns; in 1925 he was in the John Day country. In 1926 he botanized in Curry and Josephine Counties; 1927, Malheur County; 1928, (despite a hospitalization) Lake and Klamath Counties. In 1929, he covered the Oregon Coast from Curry to Clatsop County; 1930, Douglas, Josephine and Jackson Counties; 1931, Lane and Deschutes Counties; 1932, Alaska and the Yukon. In 1933, the year of his 80th birthday, he botanized in eastern Oregon and northern California. That year a fellow botanist wrote of him," He seems to have found the fountain of eternal youth in his love for plants." In 1934 he surveyed the flora of Lane County and in 1935 and 1936 he collected mosses, liverworts and lichens.

Henderson retired from the University of Oregon in 1936 at the age of 83 and moved to Tacoma, Washington to live near his married daughter Margaret Strong. Kate had died in Eugene in 1934. Margaret reported that even in his mid-80s he was physically active, hiking in the foothills of the Cascades and swimming and diving with his grandchildren.

Louis F. Henderson died in Tacoma on June 14, 1942 at the age of 88 years. He is buried in that city's Oakwood Hill Cemetery. His daughter wrote that his last year was peaceful and he simply "went to sleep at last." From Louis and Kate's two daughters have descended eight grandchildren, eleven great-grandchildren and 20 great-great-grandchildren to date.

Henderson was an avid outdoorsman, explorer, mountain climber, fly fisherman, oarsman and swimmer. He was also said to have been a keen baseball player, a fascinating raconteur, an excellent singer and a fine bridge player. He named and described 64 species and varieties of Northwest plants, the most famous of which may be *Kalmiopsis leachiana*, the endemic shrub first collected in the Siskiyou Mountains by Henderson's friends Lilla and John Leach. (Henderson originally called the plant *Rhododendron leachianum.*)

Approximately 30 species of Northwest plants were named for Henderson and 15 species and one variety bear his name today. One of the loveliest of these is the shooting star, *Dodecatheon hendersonii*, which Louis and Kate found early in their married life in 1884 on an all-day spring walk from Portland to Forest Grove.

*[Henderson left a wealth of fascinating written material in the Archives and Special Collections, University of Oregon Knight Library. I thank the helpful staff there for providing access to these documents. I also thank Henderson family members for their personal recollections. R.L.]*

Illustrations of *Erythronium oregonum* on the front and back covers by Linda Ann Vorobik.

The Oregon Flora Newsletter is published three times a year by the Oregon State University Herbarium and the Oregon Flora Project. The Editor is Rhoda Love and the Production Assistants are Alisa Anderson and Aaron Hodges.

**Oregon Flora Project Coordinator:**
Scott Sundberg
**Checklist Project Leaders**:
Kenton Chambers
Richard Halse
Jimmy Kagan
Aaron Liston
Rhoda Love
Robert Meinke
Brad Smith
Scott Sundberg
Karl Urban
David Wagner
Peter Zika
**Checklist Advisory Board**:
Ed Alverson
Karen Antell
Henrietta Chambers
John Christy
Tom Kaye
Susan Kephart
Frank Lang
Don Mansfield
Kareen Sturgeon
**Atlas Project Leaders**:
Robert Frenkel
Clay Gautier
Manuela Huso
Tom Kaye
Jon Kimerling
George Lewis
Aaron Liston
Bruce Newhouse
Charlene Simpson
Scott Sundberg
Dick Straw
Peter Zika
Don Zobel
**Atlas Project Regional Coordinators**:
Bruce Barnes
Dick Brainerd
Paula Brooks
Katie Grenier
Lucile Housley
Jerry Igo
Andy Robinson
Charlene Simpson
Veva Stansell
Dick Straw
Faye Streier
Lisa Wolf
**Address correspondence to**:
Scott Sundberg
Department of Botany & Plant Pathology
Oregon State University Cordley Hall 2082
Corvallis, OR 97331-2902
E-mail: sundbers@bce.orst.edu
(541) 737-4338; FAX (541) 737-3573
http://www.orst.edu/dept/botany/herbarium

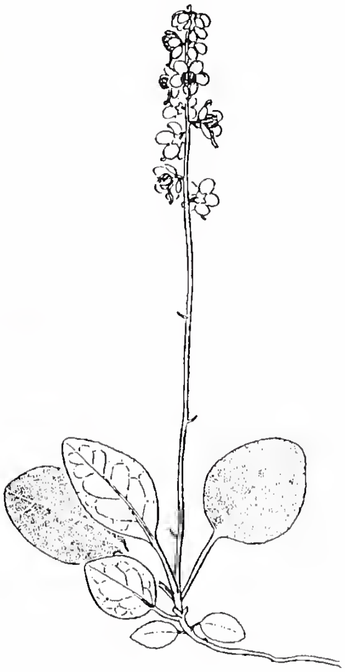
*Printed on Recycled Paper*

# Oregon Pyrolas

*by Henrietta Chambers*

A review of the genus *Pyrola* for the *Oregon Vascular Plant Checklist* revealed changes in taxonomy and nomenclature resulting from detailed studies of the genus which were completed after the publication of the *Flora of the Pacific Northwest* in 1973. Haber and Cruise (1974) compared chromosome numbers as well as morphological and anatomical features of the species of *Pyrola* (wintergreen, shinleaf) as traditionally defined, and determined that *Pyrola secunda* (one-sided pyrola) and *Pyrola uniflora* (single delight) differ significantly from the rest of the pyrolas. Following the lead of earlier workers, they segregated *P. secunda* into the genus *Orthilia*, and *P. uniflora* into the genus *Moneses*. This is the treatment we will follow for the *Oregon Vascular Plant Checklist* and is also found in the *Jepson Manual: Higher Plants of California.*

After the transfer of these two species out of *Pyrola*, there remain five species in Oregon: *P. asarifolia*, *P. chlorantha*, *P. dentata*, *P. minor* and *P. picta.* These species can best be distinguished by their leaf-shape. *P. asarifolia* has the largest (up to 8 cm long) and the broadest leaves, ranging in shape from obovate to nearly round. *Pyrola dentata* has leaves that are oblanceolate to obovate, with more conspicuous marginal teeth than the other taxa *Pyrola chlorantha* has ovate-elliptic to obovate leaves which are much smaller (rarely longer than 3.5 cm), and finer-textured. The leaves of *P. picta*, which are narrowly to broadly elliptic, are distinctive because they are whitened along the veins or mottled. They range in size from 2-7 cm long. *Pyrola minor* leaves are round, or ovate to oblong-ovate and generally less than 5 cm long.



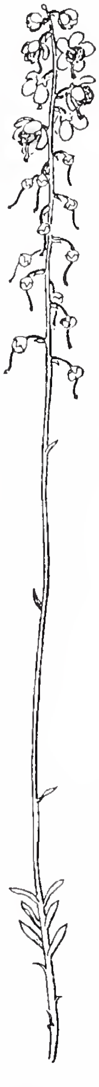
Pyrola picta *is distinctive due to white mottling on the leaves. Illustrations on pages 9 and 10 by Jeanne R. Janish from Hitchcock et al. 1969,* Vascular Plants of the Pacific Northwest, *courtesy of University of Washington Press.*

We have also chosen to follow the taxonomic recommendations of Erich Haber (1983) in his study of the morphological variability and flavonoid chemistry of the *Pyrola asarifolia* complex. He subdivided this species into two subspecies, *Pyrola asarifolia* ssp. *asarifolia* and *P. asarifolia* ssp. *bracteata*. Haber's distribution maps show that while the range of *P. asarifolia* ssp. *bracteata* is not as extensive as that of ssp. *asarifolia*, the geographic areas of the two subspecies overlap in Oregon. The presence of longer, more conspicuous floral bracts in ssp. *bracteata* is one of the major characteristics that separates it from the ssp. *asarifolia.*

Another challenge that was faced in the study of *Pyrola* was to sort out the specimens "lumped" under the name *P. aphylla*. W. H. Camp (1940) stated that the leafless pyrolas do not constitute a species, but instead "represent an assemblage of parasitic or saprophytic forms that could be any of the other species." Camp collected authentic *P. picta* and what appeared to be *P. aphylla* on two branches of the same rhizome (near Prospect, Jackson County). He also collected a series of specimens along Tehoma Creek, Mt. Rainier National Park, Washington, which showed a gradual reduction in the size of the basal leaves. We now recognize that the nutrition of the leafless "aphylla" forms is mycotrophic rather than saprophytic, because it is known that these non-green plants obtain their food through intermediate fungal connections to the roots of various photosynthetic host species.

Camp stated that the most common *Pyrola* species to have a leafless form was *P. picta*, and using floral characters, that is what I determined after studying all the available herbarium specimens at OSU. According to Camp, leafless forms may also occur in *P. chlorantha* and *P. dentata.* Hitchcock's *Flora* includes these two species as well as *P. asarifolia* in the list of leafless forms.

What I have learned about the leafless form of *Pyrola* is that *P. asarifolia* separates from the other species because of its pink to rose-purple flowers. The other species have pale-yellow to greenish- white flowers. Among those plants with greenish-white flowers, *P. chlorantha* separates because its inflorescences are usually single and are generally less than 10-flowered. *Pyrola picta* and *P. dentata* have 10-30 flowers per inflorescence, and there may be more than one flowering stem per plant. Thus, it is the latter two species that are hard to separate. *Pyrola picta* has yellowish-white petals, calyx lobes that are ovate, acute, and a style 10 mm long. *Pyrola dentata* has cream-colored petals, calyx lobes that are triangular, acute, and a style that is 7 mm long. Apparently the only floral difference between these two leafless forms I have seen is the length of the style. In the field, people can also look for the leafy form for additional clues.



*A leafless* Pyrola, *formerly called* "Pyrola aphylla."

References: Haber, E., and J.E. Cruise. 1974. *Canad. J. Bot.* 52:977-883. Haber, E. 1983. *Syst. Bot.* 8:277-298. Camp, W.H. 1940. *Bull. Torrey Bot. Club* 67:453-456.

*Ornamentals, from front page*

waste or may have intentionally been planted, possibly for erosion control. It grows on the uphill side of the road and appears to be spreading slowly by runners. No separate patches are forming and it apparently is not reproducing by seed, even though it has obviously persisted for several years. In these "borderline" cases we consider other factors, such as the biology of the plant, the likelihood that yard waste would have been dumped where the plant was found, and the number of times it has been found in unexpected places. We will not put this St. John's wort in the checklist unless there is more clear evidence that it has become naturalized.

We don't list plant species that have survived at an old home site but have not spread further. Thus, a giant redwood (*Sequoiadendron giganteum*) that could live for hundreds of years, long after buildings on a homestead have disappeared, would not be listed because the species apparently does not reproduce and spread in our state. Species that reproduce outside of cultivation for only a year or two and then disappear would also not be listed. These may not be adapted to our climate, and although they survive a mild winter or a moist summer or two, do not last long.

We also will not list plants that have spread from one landscaped area to another nearby one. Rhoda Love provides an excellent example from her yard. A cultivated violet is spreading from a flowerbed into the adjacent lawn. It has persisted in the lawn for a number of years and is acting as a lawn weed in her yard, but hasn't spread beyond it. Wilber Bluhm has likewise reported a number of species that are spreading in a similar fashion into lawns in parks in the Salem area. Although we will not include these in the Checklist, we are taking note of them and may list them in an appendix.

If you know of plants that have escaped cultivation, let us know! Tell us the circumstances under which you found them. We may also need to see a specimen. So far we have learned of over 250 cultivated escapees in Oregon and there are undoubtedly more to be discovered.

*Greater periwinkle* (Vinca major) *has become naturalized at various sites in western Oregon.*

## Baby announcement

Scott Sundberg and wife, Linda Hardison, were blessed on April 11th with a bouncing baby boy. Matthew William weighed eight pounds two ounces and measured 21 inches long. Baby and parents are doing well.

## Recent herbarium additions

*by Aaron Liston*

The Oregon State University Herbarium has recently received two significant private herbarium collections, each consisting of approximately 1000 plant specimens. Dr. Ruth Hopson Keen (1906-1998) collected plants in support of her Ph.D. thesis (Cornell, 1946) entitled *"The study of a valley; the McKenzie River region of Oregon, with special reference to the educational significance of its natural history."* Ruth Hopson Keen was an Oregon resident from age 4, and received her B.A. and M.A. degrees at the University of Oregon. Her M.A. thesis was entitled *"A climate map of Oregon, a partial analysis of climatological data to 1933."* Dr. Keen had a long career as an Oregon naturalist. She was reportedly the first female park ranger at Crater Lake National Park. After receiving her Ph.D., she taught classes throughout Oregon in Geology, Natural History and Conservation of Natural Resources for the State System of Higher Education Division of Continuing Education. After 15 years, Dr. Keen moved to Portland and taught night classes at Portland State University. Dr. Keen was an avid photographer and rockhound, and her large collection of gems and minerals has been donated to the University of Oregon Natural History Museum.

Dr. David French (1918-1994) was a distinguished anthropologist, linguist, and ethnobotanist. An Oregon native, David French was a Professor of Anthropology at Reed College from 1947-1988. His interest in the ethnobotany of the native people of the Warm Springs Reservation led him to amass a large collection of the genus *Lomatium* and other genera of Apiaceae (Umbelliferae). All specimens collected on the Reservation were previously donated to the Warm Springs Museum. The remaining specimens were donated to OSU. Some of the Apiaceae specimens are vouchers for linguistic, ethnobotanic, chromosome numbers, chemotaxonomic, and other systematics studies. Many of the specimens were identified or verified by Dr. Lincoln Constance, a world expert on the Apiaceae. We are extremely grateful to Dr. Katherine French for donating this collection to OSU, and to Reed College's Dr. Bert Brehm (Professor Emeritus), for assisting with the curation and transfer of the specimens.

These two important collections will enhance the role of the OSU Herbarium as the primary research resource for the study of the Oregon flora.

## Key to the Oregon *Rhododendron* species

*by Henrietta Chambers*

1. Stamens 5
   ..........................................*R. occidentale,* Western azalea
1. Stamens 10
   2. Leaves evergreen, leathery; generally > 7 cm; flowers purple to rose to light pink or rarely, white
      .....................*R. macrophyllum,* Pacific rhododendron
   2. Leaves deciduous, not leathery, generally < 7 cm; flowers white
      ......................................*R. albiflorum,* Cascade azalea

## Karl Urban (1943-1999)

*(This remembrance by Jerry Baker is a shortened version of one which appeared in the March, 1999, NPSO Bulletin.)*

"A flower is an exquisite thing, beautiful and delicate, a harbinger of hope for the green world that lets us all survive." So wrote the late Karl Urban in 1983.

Karl was born June 6, 1943 in Kimberly, Idaho. He majored in botany at the University of Idaho, receiving his Masters Degree in 1968. That same year he moved to Pendleton to become an instructor of botany at Blue Mountain Community College where he taught for 23 years. Karl's spring wildflower classes became famous there. In addition, each summer for many years, Karl taught intensive plant identification courses at Steens Mountain. He once wrote, "Both by profession and by nature I am a teacher. I enjoy sharing my knowledge with others and am delighted when others sieze the torch and want to learn more." Karl was one of the founding members of the Blue Mountain Chapter of the Native Plant Society of Oregon.

One of the highlights of Karl's life was the year he spent on sabbatical at OSU. Although taking a full load of classes he announced to Dr. Chambers that he wished to compile a database of the flora of Oregon using the new computer technology. Working day and night for three terms, Karl built the foundation for our current Oregon Flora database, and planted the seeds for the Oregon Flora Project. Karl later wrote, "My efforts, imperfect as they may have been, were to serve as one of several catalysts that would help the Flora Project get under way. My work is in good hands now, as Oregon's professional botanical community revises and builds upon a foundation I helped initiate. I am ecstatic that my work was not in vain!"

Nor was your life, Karl. Thank you for carrying the torch so long and so well. We shall do our best to see that your green world continues to bloom.

*Note: Memorial contibutions may be made to the Karl Urban Scholarship Fund at Blue Mountain Community College, Pendleton, OR 97801.*

## Thanks

Thanks to the Native Plant Society's Cheahmill, Emerald and Portland chapters for their generous contributions, along with the state Native Plant Society of Oregon, which has renewed its commitment to the Flora Project.

Thanks to the following individuals who have recently contributed to the project via the OSU Foundation and the Friends Group: Joseph Arnett, Bruce Barnes, Connie Battaile, Joanne Benton, Laura Brophy, Glen Cole, Ann duPont, Jim Duncan, Florence Ebeling, Nancy Eid, Robert Frenkel, Mary A. Fries, Dave Garcia, Susan Gleason, Emilie Grossmann, Molly Grothaus, Linda Hardie, Signe Hurd, Cheryl Ingersoll, Molly Iris, Marilynn Karbonski, Rhoda Lewis, Donald Limbaugh, Kenneth & Robin Lodewick, Irving Lord, Glen & Rhoda Love, Perry J. Lund, David B. Marshall, Vernon & Madeline Marttala, Esther & Peter McEvoy, Darcy McNamara, William Noble, Sandra Ott, Louise Parsons, J. Chris Pires, Wes L. Reynolds, Gregg Riegel, Bruce Rittenhouse, Don Roberts, Pete Ryan, John Savage, Kathleen Sayce, Rachel Schwindt, Darey Shell, Charlene J. Simpson, Paul Slichter, James P. Smith, Kareen Sturgeon, Mildred Thiele, Beth Vining, Josephine Von Hippel, Sarah Walker, Ellen Watrous, Wendy & Chris Wayne, Randy Webb, Faith Wilkins, Loverna Wilson, and Don Zobel.

Thanks to the following who helped by volunteering, sending species lists or specimens, or providing information on Oregon plants: Marcia Cutler, Michael Hartman, Don Heinze, David Keil, Kenneth & Robin Lodewick, Dan Mathews, Esther Gruber McEvoy, Jeanne Moore, Steve Northway, Robert Ornduff, and Rebecca Thompson.

## Friends News

A table-top Oregon Flora Project display, designed and built by Esther McEvoy, appeared at flower shows in Eugene and Portland in May. Any group wishing to borrow the display may contact the Friends Group care of the OSU Herbarium. Wish List: the Oregon Flora Project is in great need of a scanner and color printer. Donations towards these items would be gratefully accepted.

Name ______________________________

Address ____________________________

____________________________________

____________________________________

Phone and/or e-mail ____________________

Mail to:

Scott Sundberg
Oregon Flora Project
Dept. of Botany & Plant Pathology
Oregon State University
2082 Cordley Hall
Corvallis, OR 97331-2902

### Would you like to make a donation?

Tax-deductable donations can be made to the Oregon Flora Project by sending a check made out to the Oregon State University Foundation to Scott Sundberg at the address on this page. Please note on the check that it is for the Oregon Flora Project. Your donations go primarily toward newsletter expenses and student wages.

☐ Please check here if you do not wish to have your name listed in our "Thanks" column or on our Internet web site.

☐ Please send the Asteraceae Checklist (include donation check if appropriate).

☐ Please put me on the *Oregon Flora Newsletter* mailing list.

Oregon Flora Project
Dept. of Botany & Plant Pathology
Oregon State University
2082 Cordley Hall
Corvallis, OR 97331-2902

*Return Service Requested*

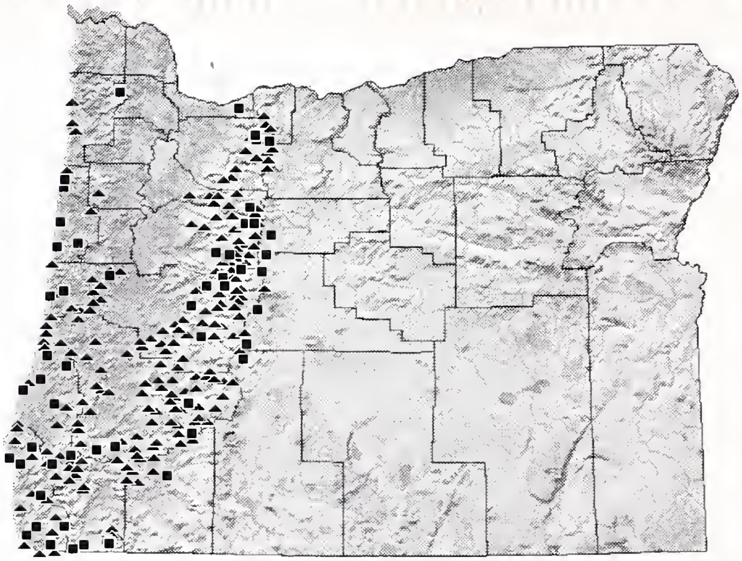
Non-Profit Org.
U.S. Postage
**PAID**
Corvallis, OR
Permit No. 200

The New York Botanical Garden
Library G-607, Serials &
Exchange
Bronx NY 10458-5126

LIBRARY
AUG 10 1999
NEW YORK
BOTANICAL GARDEN

### Did you know?
### Ericaceae Tidbits

- *Chimaphila umbellata*, prince's pine or pipsissewa, was originally called *Pyrola umbellata* by Linnaeus. Frederick Pursh, the German botanist who is well known for naming the plants of the Lewis and Clark Expedition, coined the genus name *Chimaphila*, a word which means "winter-loving" in Greek.
- The genus name *Pyrola* was used by Linnaeus and is said to mean "little pear" because some species have pear-shaped leaves. C. L. Hitchcock, in *Vascular Plants of the Pacific Northwest*, says of the pyrolas, "Attractive in the wild where they should be left since they cannot be cultivated successfully."
- Hitchcock reports that on May 3, 1930 J. E. Barto collected an albino form of *Rhododendron macrophyllum* in Junction City, Lane County, Oregon. The OSU Herbarium has a white-flowered form collected by Frisbie & Breakey near Sixes in Curry County in 1954.



**Pacific rhododendron in Oregon**
Distribution of *Rhododendron macrophyllum* in Oregon, based on records in the OSU Herbarium database and the Oregon Plant Atlas database. Squares represent specimen vouchers and triangles show observations. Please let us know if you have seen it elsewhere.

755
5
3

# OREGON FLORA NEWSLETTER

Volume 5 Number 3 • Oregon State University • October 1999

## Dick Straw: autobiographical sketch

*[Dick Straw of Talent, Oregon has been a prodigious provider of plant lists for the Oregon Vascular Plant Atlas Project. When I asked him for biographical information for OFN readers, he graciously responded with such an articulate account of his interesting life that I decided to let him tell his story in his own words. What follows is a somewhat edited version of what he sent me.]*

I was born in 1926 in St. Paul, Minnesota, the oldest of three boys. My father was a civil servant, my mother's family among the early residents of the area. I attended high school in St. Paul. After graduation in 1944, I was drafted into the Army and served most of two years, mainly in Georgia, learning and teaching radio repair.

After discharge in 1946 I entered the University of Minnesota in Minneapolis, graduating with a BA in zoology and a minor in botany. My major interest at the time was in birds. A master's program on the population biology of frogs was interrupted in 1950 when my National Guard unit was called for the Korean War where I served with a radio unit and later the U.N. Civil Assistance Command, doing crop surveys. I managed to collect a number of birds and published a minor paper on my return in 1952. I then entered the doctoral program at Rancho Santa Ana Botanic Garden in Claremont, newly associated with the Claremont Graduate School. There, in 1955, with the help of the National Science Foundation, I received the first Ph.D. in botany awarded by that group, working with Verne Grant on pollination biology and taxonomy of *Penstemon.*

*See Straw, page 14*

Photo: Ben Krieg

*Dick Straw*

## Some new names and clarifications for Oregon's flora

*by Kenton L. Chambers*

Under the category of new names, the author of the treatment of *Rubus* for the Checklist, Dr. Maxine M. Thompson, did a thorough review of European literature on this difficult genus, which revealed that the current Latin name of our most abundant, weedy species, Himalayan blackberry, is incorrect. In recently published floras such as *The Jepson Manual* (1993) and *Intermountain Flora, vol. 3A* (1997) this blackberry is called *Rubus discolor* Weihe & Nees, while Peck's *Manual of the Higher Plants of Oregon* (1961) used the name *Rubus procerus* P. J. Müll. Dr. Thompson found that *Rubus* experts in Europe, such as Prof. H. E. Weber of Onasbrueck, Germany, prefer the name *R. armeniacus* Focke, saying that the above two names are either invalid or misapplied. The plant in question was native to Armenia, according to Prof. Weber, but was brought into cultivation early in the 19th century and selected for the production of large fruits. The species long ago escaped from gardens and became a weedy pest in many parts of the world, propagating entirely by asexual reproduction. In Oregon it seems capable of swallowing abandoned farmhouses and barns. In *The Jepson Manual* one finds the further ominous note, "[f]avored by rats for food, shelter."

A recently published monograph of *Vaccinium* section *Myrtillus*, our native single-flowered bush huckleberries, clarifies the status of three species, *V. alaskaense* Howell, *V. globulare* Rydb., and *V. coccineum* Piper, which have long been a puzzle to Oregon taxonomists. Based on over 20 years of biosystematic studies (morphological, genetic, and chromosomal analyses), Sam Vander Kloet and Timothy Dickinson (*Brittonia* 51:231-254. 1999) have reduced the number of recognized species in this group to seven, rather than the nine given in, for example, *Flora of the Pacific Northwest.* As a result, *V. alaskaense* becomes a synonym of *V. ovalifolium* Sm. and *V. globulare* is submerged in *V. membranaceum* Douglas ex Hook. Features that had been used to separate the members of these taxon-pairs (flower shape, length and angle of pedicels, time of flower appearance) proved to be developmentally variable and sensitive to environmental effects. *Vaccinium coccineum,* whose type came from Steve Peak in Josephine County, is indistinguishable from *V. deliciosum* Piper, according to

*See New names, page 14*

*Straw, from front page*

I joined the faculty of the new California State College at Los Angeles in 1956, and remained there until I retired in 1981. During this time, the National Science Foundation provided six years of research support which funded three summers of field work in Mexico as well as extended field and herbarium work in the US. During 1963-64, I had a Fulbright fellowship in Peru with NSF support for an additional three months in the Andes with a team from Berkeley. Work on the genus *Calceolaria* which I began in Peru was suspended after my return to Los Angeles when I found myself in an administrative position. Except for a two-year stint as a contract staff member of the Peace Corps in Malaysia, I spent much of my subsequent career in administrative posts.

On my retirement in 1981 I took a position as an academic computing specialist at Southern Oregon State College in Ashland, finally retiring a second time in 1992 from my post as Director of Computing Services. Along the way I managed to publish a few things in *Penstemon* taxonomy, especially on Mexican species, as well as a theoretical paper on pollinator competition.

I am now thoroughly retired, and spend a good deal of time on botany, enjoying collecting and gathering data for the Jackson County species list and the Oregon Plant Atlas, plus geneology, much aided by the Internet. My wife, Dorothy, a nursing administrator, and I have four children and six grandchildren, all of whom live in the Northwest.

*[I asked Dr. Straw how it happened that he was able to contribute so many species lists to the Atlas Project.]*

I am no longer sure how I got involved in the project, but Scott Sundberg issued a request for plant lists, and Joan Seevers, BLM botanist in the Medford District allowed me to xerox a volume of survey lists from their records. Wayne Rolle and Tom Atzet of the Forest Service, Richard Callaghan, Barbara Mumblo, Frank Lang, Don Heinze, Jim Duncan, and others also contributed. Mostly I copied lists and sent them to Dr. Sundberg, though I did make a couple myself with Frank Lang's help. Botanical knowledge will be greatly enhanced when a new Oregon Flora emerges, so contributions to it are of great importance. Any efforts to hurry that day along are surely worth while.

---

Illustrations of *Erythronium oregonum* on the front and back covers by Linda Ann Vorobik.

---

The Oregon Flora Newsletter is published three times a year by the Oregon Flora Project and the Oregon State University Herbarium. The Editor is Rhoda Love and the Production Assistant is Aaron Hodges. Scanning courtesy of Clay Gautier.

---

**Oregon Flora Project Coordinator:**
Scott Sundberg
**Checklist Project Leaders:**
Kenton Chambers
Richard Halse
Jimmy Kagan
Aaron Liston
Rhoda Love
Robert Meinke
Brad Smith
Scott Sundberg
Karl Urban
David Wagner
Peter Zika
**Checklist Advisory Board:**
Ed Alverson
Karen Antell
Henrietta Chambers
John Christy
Tom Kaye
Susan Kephart
Frank Lang
Don Mansfield
Kareen Sturgeon
**Atlas Project Leaders:**
Robert Frenkel
Clay Gautier
Manuela Huso
Tom Kaye
Jon Kimerling
George Lewis
Aaron Liston
Bruce Newhouse
Charlene Simpson
Scott Sundberg
Dick Straw
Peter Zika
Don Zobel
**Atlas Project Regional Coordinators:**
Bruce Barnes
Dick Brainerd
Paula Brooks
Katie Grenier
Lucile Housley
Jerry Igo
Andy Robinson
Charlene Simpson
Veva Stansell
Dick Straw
Faye Streier
Lisa Wolf

**Address correspondence to:**
Scott Sundberg
Department of Botany & Plant Pathology
Oregon State University 2082 Cordley Hall
Corvallis, OR 97331-2902
E-mail: sundbers@bcc.orst.edu
(541) 737-4338; FAX (541) 737-3573
http://www.orst.edu/dept/botany/herbarium

*Printed on Recycled Paper*

---

*New names, from front page*

Vander Kloet and Dickinson, and therefore it becomes a synonym of that species. Other Oregon taxa of section *Myrtillus* recognized by these authors are *V. parvifolium* Sm., *V. scoparium* Leiberg ex Coville, *V. myrtillus* L., and *V. caespitosum* Michx. Several additional *Vaccinium* species that were not part of their study also occur in the state.

*Iliamna bakeri* (Jeps.) Wiggins, family Malvaceae, is a rare species of the southern Oregon Cascades and northern California. Ira Wiggins, who monographed the genus in 1936 (*Contrib. Dudley Herb.*, 1:213-229), cited a 1923 collection from Swan Lake Valley, Klamath County, as the only known Oregon occurrence. Wayne Rolle, Richard Brock, Veva Stansell, and other sharp-eyed field botanists in Jackson County have found populations of an *Iliamna* that resembles *I. bakeri* but is taller and has a different form of leaf-lobing than in the published descriptions of that species. After examining all available specimens from the University of California herbarium, I believe that these Oregon plants do indeed represent *I. bakeri*. The species' description in *The Jepson Manual* (page 751) should be modified to give *I. bakeri* a height of *up to 12 dm* and upper leaves that are shallowly *to deeply* 3-5 lobed. Its lower stem leaves are *cordate*-based, not "tapered to truncate." The most obvious difference I see between *I. bakeri* and our more common species *I. rivularis* (Douglas ex Hook.) Greene is that the calyx of the latter is less than 1 cm long, versus 1.3-2 cm in *I. bakeri*. The third species in Oregon, *I. latibracteata* Wiggins, differs from *I. bakeri* in having large accessory bracts accompanying the calyx. Its range is west of that of *I. bakeri*, extending from Jackson County to the coast.

# Fuji Mountain in south Lane County yields botanical surprise

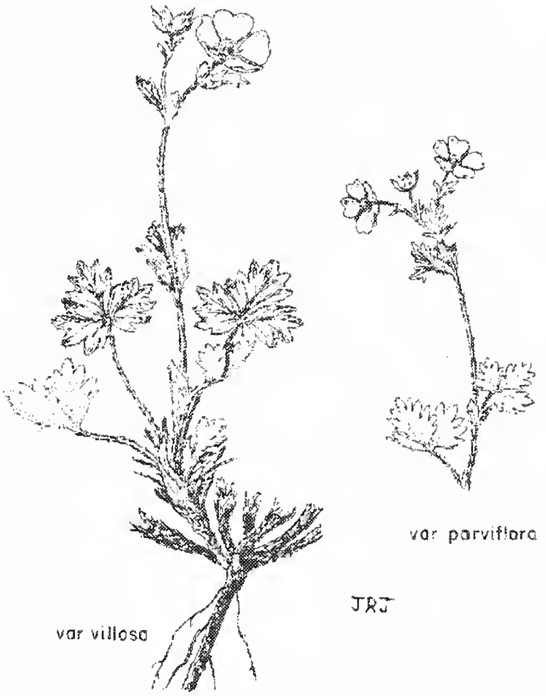
*by*

*Charlene Simpson, Emerald Chapter, NPSO*

Fuji Mountain, in the Waldo Lake Recreation Area, has been a destination for Emerald Chapter, Native Plant Society of Oregon (NPSO), field trips for the past several seasons. Situated approximately two miles south of Waldo Lake in south Lane County the 7,144 foot summit affords views on a clear day of the Cascades from Mount Shasta to Mount Hood. Fuji Mountain falls within the High Cascade geological province, and is one of a series of composite volcanoes, subsequently glaciated (Baldwin 1981).

The story of Fuji's botanical surprises begins in the early 1990s when Emerald Chapter members Phil Warner and Dale McBride first began hiking to Fuji to enjoy and photograph the gorgeous views and interesting alpine flora. On one trip, Dale noticed and photographed an interesting *Heuchera* at the summit, and for two years he encouraged fellow plant enthusiasts to return to the site. Finally in July 1998 a field trip was organized, and the "different" *Heuchera* was identified as the relatively uncommon *Heuchera merriamii.*

But Fuji held yet another treasure. On the same July 1998 field trip, Emeraldites, Dave Predeck and Dale McBride went to search nearby precipitous cliffs. They rejoined the main group with a sample of an unusual cinquefoil which was deposited on the rocks nearby where Charlene Simpson photographed it before it was placed in John Koenig's press. It did not key satisfactorily in floras we had brought and its appearance was outside our prior experience. Charlene noted the cespitose habit, densely villous trifoliate leaves and the deep yellow flowers and thought to herself that the identification would be a "piece of cake." Later research, using Abrams' *Flora*, described *Potentilla villosa* which seemed to fit, but Charlene was dissuaded by the published range: from Alaska through the North Cascades of Washington to Mt. Hood in Oregon.



*When C. L. Hitchcock described* Potentilla villosa *in* Vascular Plants of the Pacific Northwest, Part 3, *he recognized the new var.* parviflora *based on a J. W. Thompson collection from Mt. Angeles, Clallam County, Washington. The new variety was segregated on the basis of smaller petal size, 5-8 mm, compared with petals 8-12 mm in var.* villosa. *He gave the range of var.* parviflora *as "coastal Alaska from about Juneau, south to the Olympics and Cascade mountains of Washington, and in the southern Rockies." Illustration by Jeanne R. Janish, courtesy of University of Washington press.*

In the meantime John Koenig arrived at *Potentilla villosa* var. *parviflora* independently and confirmed his identification by checking collections at Oregon State University Herbarium. He noted, however, that the majority of collections were from outside of Oregon with locations far to the north of Fuji Mountain. One previous collection was from "tight crevices of Barrett Spurs," on the north side of Mount Hood, by McMullen, late summer, 1956 filed in the Peck Herbarium. Marty Stein, Mount Hood National Forest botanist, searched that area about two years ago without relocating the plant.

Summer 1998 ended and we moved on to other pursuits. The Fuji Mountain *Potentilla villosa* research was shelved and the collected specimen remained in John's press. Charlene added the species to the Lane County Flora Checklist.

A year later, in June of this year, Charlene began finalizing the Lane County Vascular Plant Checklist. With the help of Scott Sundberg of the Oregon Flora Project, attributes, including rarity, were appended to the list. When the rarity codes were attached Charlene was astounded to see that *Potentilla villosa* was considered extinct in Oregon. She removed the taxon from the Lane Checklist pending further research and broadcast the need for a 1999 trip to examine the plant more carefully to check the initial identification.

On August 5, 1999, Willamette National Forest botanist, Jenny Lippert, and other Forest Service personnel accompanied Emerald Chapter members to Fuji. Our plan was to make a second collection only if the population could support another taking, otherwise we would make do with the somewhat over-handled specimen in the press. When we arrived, only twelve individuals were counted and the decision was made not to collect again.

Charlene consulted Scott Sundberg, who suggested that Barbara Ertter, of the University of California at Berkeley, author of the *Potentilla* treatment for the *Oregon Vascular Plant Checklist*, might examine the specimen to verify the identification. To our delight she agreed, responding in September that, based on existing taxonomy, the identification of *Potentilla villosa* var. *parviflora* is confirmed. This is only the second known collection of this taxon in Oregon and perhaps the only population presently extant in our state.

Reference: Baldwin, E. M. 1981. *Geology of Oregon*. University of Oregon Cooperative Bookstore, Eugene, Oregon.

---

*[Editors note: Please make the following changes to the article on L.F. Henderson in the last issue of the* Oregon Flora Newsletter. *Henderson was Curator at UO for 15 years, retiring in 1939 at age 86. I apologize for the errors. R.L.]*

## George Argus visits OSU

*by Scott Sundberg*

It was a delight this September to host a visit to OSU by Dr. George Argus. Dr. Argus, who retired from the National Herbarium, Canadian Museum of Nature (Ottawa) in 1995, is contributing taxonomic treatments of the willow genus *Salix* for the *Oregon Vascular Plant Checklist* and the *Flora of North America*, and is a member of the FNA Editorial Committee. He is well known for his life-long studies of willows as well as for his contributions toward rare plant efforts in Canada.

Dr. Argus was busy during his two-week stay in Corvallis. The first two days were devoted to travel and to collecting plants in the field. He then spent a day teaching a workshop on the identification of the willows of Oregon and Washington using his computerized key. Twenty-two people attended and learned how to use the key, which is written with INTKEY software. The key allows the user to identify vegetative, flowering, or fruiting specimens of this taxonomically difficult genus.

George spent the remainder of his visit examining and identifying specimens in the OSU Herbarium. In a period of twelve days he annotated approximately 2600 specimens, 1672 of which had been collected in Oregon. We have entered label data from the Oregon specimens into the OSU Herbarium database and are currently adding latitude and longitude coordinate information. This will soon allow us to map willow distributions in Oregon.

Dr. Argus' travel expenses were underwritten by the Oregon Flora Project, the OSU Herbarium, and the Oregon Coalition of Interdisciplinary Databases (OCID). Thanks, George for your visit and for volunteering your time to help with the Flora project. Thanks also to Danna Lytjen and Charlene Simpson, who helped collect willows, and to participants in the workshop, many of whom contributed to the Flora project and brought specimens.

*Photo: Rhoda Love*

*Dr. George Argus demonstrating his computerized key to the willows to Penny Lapham during the willow identification workshop.*

### Have you seen these taxa that are possibly extinct in Oregon?

In the article on page 15, Charlene Simpson tells of relocating *Potentilla villosa* var. *parviflora*, a taxon considered possibly extinct. The map on the back of this issue shows approximate localities for other plant taxa that are possibly now extinct in Oregon. Data are from the Oregon Natural Heritage Program (ONHP). Please be on the lookout for these taxa. If you think you have spotted one, please contact us or the ONHP.

| Plant name | Counties | Year last noted |
|---|---|---|
| *Agrostis hendersonii* | Jackson | 1930 |
| *Allium peninsulare* | Jackson | 1931 |
| *Allium robinsonii* | Gilliam, Morrow, Sherman, Umatilla | 1967 |
| *Androsace elongata* ssp. *acuta* | Jackson | 1887 |
| *Arenaria franklinii* var. *thompsonii* | Gilliam, Umatilla | 1940 |
| *Artemisia campestris* var. *wormskioldii* | Sherman | 1941 |
| *Astragalus californicus* | Jackson | 1930 |
| *Astragalus kentrophyta* var. *douglasii* | Umatilla | 1830 |
| *Calochortus indecorus* | Josephine | 1948 |
| *Carex comosa* | Josephine, Multnomah | 1945 |
| *Carex eleocharis* | Baker, Klamath | 1938 |
| *Castilleja levisecta* | Linn, Marion, Multnomah | 1938 |
| *Cicuta bulbifera* | Klamath | 1950 |
| *Clintonia andrewsiana* | Curry | 1976 |
| *Cryptantha leucophaea* | Gilliam | 1882 |
| *Howellia aquatilis* | Clackamas, Marion, Multnomah | 1977 |
| *Lomatium salmoniflorum* | Wasco | 1914 |
| *Lupinus sericeus* var. *egglestonianus* | Sherman | 1963 |
| *Microseris douglasii* ssp. *douglasii* | Jackson | 1889 |
| *Phacelia malvifolia* | Curry | 1884 |
| *Plagiobothrys lamprocarpus* | Josephine | 1921 |
| *Potamogeton foliosus* var. *fibrillosus* | Harney, Klamath | 1927 |
| *Salix laevigata* (as *S. bonplandiana*) | Klamath | 1940 |
| *Senecio porteri* | Wallowa | 1899 |
| *Stylocline psilocarphoides* | Malheur | 1943 |

## Thanks

In September Jerry Igo, of NPSO's Mid-Columbia Chapter, issued his Oregon Flora Challenge, urging all chapters to raise funds for the Flora project from among their members. We affectionately refer to this as the "Igo Challenge." We are very grateful for donations from Mid-Columbia, Portland and Emerald chapters that have arrived in response to the challenge.

Thanks to the following who have recently contributed to the project via the OSU Foundation or the NPSO Friends: Jon Anderson, Karl Anderson, Wilbur Bluhm, Paula Brooks, John Christy, Alan Curtis, Robyn Darbyshire, Hilary Dearborn, Jan & Dave Dobak, Don Eastman, Jannette Ferguson, Clay Gautier & Gail Baker, Michael Hartman, Susan Hawes, Charlene Holzwarth, Lucinda Huber, LaRea Johnston, John Koenig, Suzanne & Frank Lang, Shane Latimer, Kenneth & Robin Lodewick, Rhoda & Glen Love, Esther & Peter McEvoy, Margaret & Stan Meierhenry, Dan & Pat Montague, Mark & Julie Nichols, John Reynolds, Don Roberts, Charlene Simpson, Veva Stansell, Kareen Sturgeon, Jeffrey & Linda Taylor, Tektronix Foundation, Beth Vining, Molly Widmer. Thanks also to those who responded to the Igo Challenge and to three other anonymous donors.

Thanks to those who have helped by volunteering, sending species lists or specimens, or providing information on Oregon plants: Wilbur Bluhm, Lynda Boyer, Frank Callahan II, Don Heinze, John Koenig, Dan Luoma, Danna Lytjen, Virginia Maffitt, Elaine Plaisance, John Reynolds, Sue Vrilakas.

---

**The Asteraceae Checklist**, published by the Checklist project in February 1998, is being reprinted. For those of you who have participated in or donated to the Oregon Flora Project, the Asteraceae Checklist is free of charge. Others may receive a copy in return for a donation of any amount to the Oregon Flora Project. Please use the form below and enclose your check to the OSU Foundation. (Our cost for printing and postage is approximately $4.00.)

## Project news

*by Scott Sundberg*

We now list 4,426 Oregon species, subspecies and varieties in the Checklist database. Approximately 18% of Oregon plant taxa are non-native. Henny Chambers has recently submitted a manuscript of the Caryophyllaceae (pink family) checklist and a number of other treatments have been submitted. We are planning to publish a checklist of monocot families, other than grasses, early next year. The Asteraceae checklist will soon be online at our Web site. Watch for an announcement in this newsletter and in the NPSO Bulletin.

The Atlas project is progressing rapidly. We are now preparing a demonstration of the online Atlas. Over the summer, herbarium specimen label data for most tree species were entered into a database. The specimen database now has about 23,000 records and the database of sightings has about 160,000 records. Jason Alexander, database manager for the project, has also implemented a number of changes in the database structure and entry forms to make data entry and analysis more efficient.

---

## Friends News

The Friends group continues to operate under the aegis of the Native Plant Society of Oregon (NPSO), for whose support we are very grateful. Response to the flyer distributed last fall has been gratifying. Membership in the Friends is now over 100 and eleven Bonnie Hall prints have been sent to major donors. The Friends committee has been meeting regularly and currently has seven members. Our display appeared at the recent dedication of the Dr. Bonnie C. Templeton Conference Room and the Herbarium Preparation Room in Cordley Hall where it attracted a good deal of notice. The committee is currently designing a new display, outlining grant applications and pursuing other sources of funding. Many thanks to all our supporters. The Friends address is: Friends of the Oregon Flora Project, The Native Plant Society of Oregon, PO Box 402, Corvallis OR 97339-0402. Please make your checks out to NPSO.

Name ______________________________

Address ____________________________

___________________________________

___________________________________

Phone and/or e-mail __________________

Mail to:

Scott Sundberg
Oregon Flora Project
Dept. of Botany & Plant Pathology
Oregon State University
2082 Cordley Hall
Corvallis, OR 97331-2902

### Would you like to make a donation?

Tax-deductable donations can be made to the Oregon Flora Project by sending a check made out to the Oregon State University Foundation to Scott Sundberg at the address on this page. Please note on the check that it is for the Oregon Flora Project. Your donations go primarily toward newsletter expenses and student wages.

☐ Please check here if you do not wish to have your name listed in our "Thanks" column or on our Internet web site.

☐ Please send the Asteraceae Checklist (include check if appropriate).

☐ Please put me on the *Oregon Flora Newsletter* mailing list.

Oregon Flora Project
Dept. of Botany & Plant Pathology
Oregon State University
2082 Cordley Hall
Corvallis, OR 97331-2902

Non-Profit Org.
U.S. Postage
**PAID**
Corvallis, OR
Permit No. 200

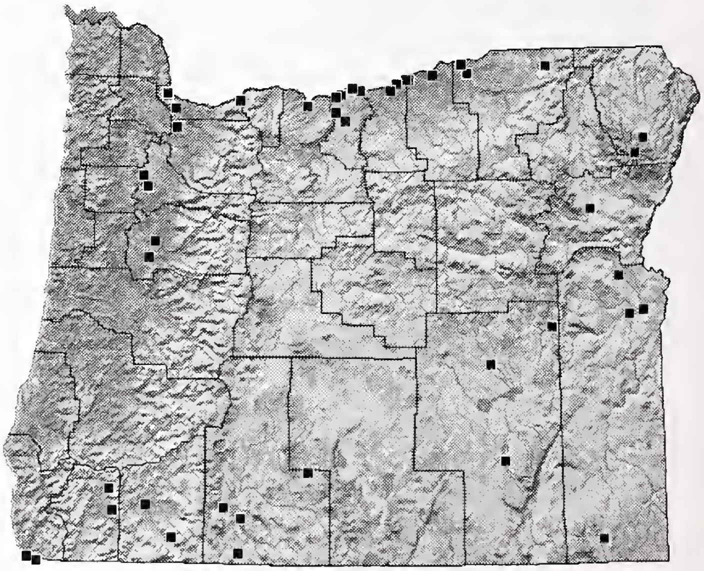
LIBRARY
NOV 30 1999
NEW YORK
BOTANICAL GARDEN

The New York Botanical Garden
Library G-607, Serials &
Exchange
Bronx NY 10458-5126

### Did you know?

*The following are presented in memory of our friend, Professor Bastiaan J. D. Meeuse of the University of Washington who died July 27, 1999 at the age of 83. Dr. Meeuse was one of this country's best known authorities on pollination.*

- An interesting pollinator which often visits species of *Angelica*, as well as Queen Anne's lace and ivy is a bee-imitator, the drone fly, *Eristalis taenax*. The larvae of this fly mature in stagnant water such as is found in dirty bird baths.
- Ant pollination has rarely been observed, but it has been documented in dwarf owl clover, *Triphysaria pusilla* (formerly *Orthocarpus pusillus)*, the diminutive scroph which is common in Willamette valley meadows in very early spring.
- *Calypso bulbosa*, the fairy slipper orchid of our coniferous woods, employs pollination by deception. Young bumblebees are attracted by the color of the blossoms, but no nectar is offered. A bee several times fooled learns to stay away, but enough neophyte bumblebees continue to hatch to pollinate the flowers.



**Possibly extinct Oregon plants**

Historically known localities of plants now listed by the Oregon Natural Heritage Program as "possibly extinct" in Oregon. See page 16 for list of names.